

terminal disclaimer. Once again, this request has not been considered, thus the Office's confirmation is yet again respectfully requested that Applicant presently stands \$65 in credit with respect to this application.

2. Rejection under 35 U.S.C. §103(a) over Klimpert in view of Welbourn.

Claims 21–23 and 26–38 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Klimpert (U.S. Patent No. 5,735,521) in view of Welbourn (U.S. Patent No. 3,479,751). This rejection is respectfully traversed.

It is well established that a *prima facie* case of obviousness requires that all three of the criteria set forth in MPEP §2143 be met. A *prima facie* case of obviousness cannot be sustained in the present situation, for failure to satisfy at least two of the three criteria, as more fully described below.

2.1. No suggestion or motivation to combine reference teachings

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. MPEP §2143.01.

The Examiner characterizes Welbourn as disclosing “a puzzle type kit for use by those suffering from mental disorders ...” (Action, page 3, line 1) and goes on to assert that “... it would have been obvious to one of ordinary skill in the art at the time of the invention to use the device of Klimpert for the same purpose, since they are both puzzle type devices and both would thus have therapeutic value as taught by Welbourn” (Action, page 3, lines 3–5).

In response, Applicant sets aside for the moment (but see below) the point that Welbourn does not teach therapeutic value of his device, and does not contemplate use of his device by people with mental disorders, except for the specific case of mental retardation, which is a very different condition from adult dementia. Welbourn (col. 1, lines 25–30) states his objective as “to provide a manual dexterity training device that provides amusement, challenge, and dexterity improvement for a wide range of human subjects ranging from mentally retarded persons and immature children to sophisticated intelligent adults.” Even if

this objective were to accord with any definition of “therapeutic”, which is not admitted by Applicant, it does not follow that, just because Welbourn’s device could be said to have “therapeutic value”, any puzzle device, more specifically the puzzle device of Klimpert, “would thus have therapeutic value” as alleged in the present Action.

Welbourn’s device can be seen to be of considerable design complexity, involving for example a grasping tool inserted through a slot in an upright shield (col. 1, lines 63–65), and a reading of Welbourn as a whole makes clear that this complexity is essential to the function of the device as a dexterity training aid. Like many training aids in the art, Welbourn’s is “game-like” (col. 1, line 22); however, this does not mean that other “game-like” devices, more particularly simple puzzle devices such as Klimpert’s, would function similarly as dexterity training aids. Indeed Welbourn can be seen to teach away from the combination with Klimpert by the very complexity of his device and its requirement for a grasping tool to manipulate the pieces. A key to the present invention lies in the importance to a dementia sufferer of tactile properties of the pieces, and Welbourn teaches away from this by having pieces that are not handled directly by the subject, but manipulated by a grasping tool.

It is concluded, therefore, that one of skill in the art would not have been motivated to combine the disclosures of Klimpert and Welbourn, even if (which is not admitted) such combination would have led to the present invention.

2.2. All claim limitations not taught or suggested

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. MPEP §2143.03.

Applicant agrees with the Examiner’s finding (Action, page 2, bottom two lines) that Klimpert fails to teach the two-step method of instant Claim 21 wherein a kit is provided to an adult subject having dementia and used in the manner defined in Claim 21 to provide a therapeutically beneficial cognitive challenge appropriate to the subject’s mental acuity.

However, as alluded to above, the present Action goes on to mischaracterize Welbourn in stating that “Welbourn discloses a puzzle type kit for use by those suffering from mental disorders for providing a therapeutically beneficial challenge appropriate to the subject’s mental acuity” (Action, page 3, lines 1–2). Claim elements admitted by the Examiner to be

missing from Klimpert, namely provision of a puzzle-type kit to an adult subject having a medically diagnosed dementia, and use of the puzzle-type kit to provide a therapeutically beneficial cognitive challenge appropriate to the subject's mental acuity, are, in fact, neither taught nor suggested by Welbourn.

Yet another claim element missing from Klimpert and not taught or suggested by Welbourn is the property of pieces according to the present invention that they have surface layers formed collectively of a plurality of soft fabrics that are distinguishable by touch (or, in an embodiment even further removed from Klimpert, subsurface layers that are distinguishable by touch through a lightweight surface fabric).

Thus at least three claim elements are not taught or suggested by the combination of references cited, and accordingly a *prima facie* case of obviousness cannot be sustained. In further rebuttal, these three missing elements are now examined in greater detail.

2.2.1. Subject having a medically diagnosed dementia

Welbourn's subjects are broadly defined as being "of whatever degree of mental sophistication and physical dexterity" (col. 1, lines 23–24); or "ranging from mentally retarded persons and immature children to sophisticated intelligent adults" (col. 1, lines 28–30). While these broad definitions can be read to embrace in generic fashion the particular subject recited in instant Claim 21, namely an adult subject having a medically diagnosed dementia, they fail to teach or suggest that particular subject. Disclosure of a genus does not amount to disclosure of a species within that genus. Welbourn later describes an embodiment of his device said to be suitable for "relatively uncoordinated trainees, as in the case of very young children or mentally retarded persons" (col. 4, lines 46–47). Again, this is a very different subject population from adults having a medically diagnosed dementia.

As previously shown in the file record of the present application, the art is shown to teach away from use of infant-directed toys and teaching aids for providing cognitive benefit to adult sufferers from dementia. For example, as pointed out in Applicant's response dated July 3, 2006, U.S. Patent No. 5,082,446 to Sclan & Reisberg states that "[i]nfants are fundamentally different from patients with dementia" (Sclan, col. 3, lines 4–5, emphasis added); that "[a]mong the differences are cognitive, motor and behavioral differences" (Sclan,

col. 3, lines 8–9); and that these differences “render the unmodified use of infant tests for dementia patients uninterpretable, misleading or, in some instances, impossible to administer” (Sclan, col. 3, lines 21–24). Thus, Sclan would have led one of skill in the art to conclude that an apparatus useful as a dexterity training aid for infants (such as the device of Welbourn) would be unlikely to have benefit for an adult dementia sufferer. In other words, Sclan provides evidence that Welbourn, in mentioning usefulness of his device for very young children (which he lumps together with mentally retarded persons), makes no suggestion as to usefulness for adult subjects with dementia.

2.2.2. Therapeutically beneficial cognitive challenge

As admitted in the present Action (page 2, bottom line), Klimpert fails to teach use of his textured jigsaw puzzle for therapeutic purposes in a subject having dementia. Welbourn, even if motivation existed for combination with Klimpert, does not supply this missing feature of instant Claim 21. Welbourn’s article is described as a “manual dexterity training device,” differing from the present invention at least in the following respects.

- (a) Welbourn’s article is used for training a person in a skill in which that person (whether child, mentally retarded person or sophisticated intelligent adult) is presumably deficient. By contrast, the method of the present invention employs a kit to provide therapy to a person with dementia but having sufficient motor skill to perform, with encouragement and/or assistance if necessary, the required manipulation of pieces.
- (b) Welbourn’s article addresses manual dexterity as opposed to a cognitive challenge as addressed by the present invention. Welbourn proposes that his device “provides amusement, challenge, and dexterity improvement” (col. 1, lines 26–27) but nowhere specifically contemplates a cognitive challenge appropriate to the subject’s mental acuity, far less a therapeutically beneficial cognitive challenge.

Therefore the statement in the present Action (page 3, lines 1–2) alleging that Welbourn discloses his article to be useful for providing a therapeutically beneficial challenge is incorrect. Of the passages of Welbourn cited in the Action as supporting this statement, the passage at col. 1, lines 25–29 fails to teach or suggest a therapeutically beneficial cognitive

challenge, as shown above, and the passage at col. 1, line 72 – col. 2, line 7 appears to have no relevance to the point being alleged.

2.2.3. Plurality of soft fabrics

It is important to operation of the method of the present invention that the pieces are distinguishable by touch. Leaving aside the embodiment of the present invention wherein tactile distinguishability is provided by subsurface layers, which are clearly not contemplated by either Klimpert or Welbourn, it is noted that where tactile distinguishability is provided by surface layers of the pieces, this results (as specified in instant Claim 21) from the surface layers being formed collectively of a plurality of soft fabrics that are distinguishable by touch.

Such tactile distinguishability as is found in Klimpert's puzzle derives entirely from two contrasting surface types, that can be described as "soft" (flocked) and "hard" (non-flocked). This is quite different from the pieces useful according to Applicant's invention, which, where surface layers as opposed to subsurface layers provide tactile distinguishability, employ a plurality of soft fabrics (*i.e.*, two or more different soft fabrics) to achieve this effect. Attention is respectfully drawn to the present specification, at page 7, lines 16–21, which reads:

Soft fabrics herein illustratively include knitted, woven, piliferous and spongiform textiles and real and simulated furs, skins and leathers. Typically a variety of soft fabrics are used in construction of the activity aid, thereby providing the differing tactility required in practice of the invention. The selection of soft fabrics will be found to have a strong bearing on the degree of pleasure derived by an individual subject through tactile stimulation.

Klimpert's flocking material does not appear to meet the requirement of the present invention for a "fabric," instead being a "particulate or granular material" (Klimpert, col. 2, lines 6–7) that is applied to a surface with glue. Even if Klimpert's flocking material were considered to be a "fabric," no suggestion is found in Klimpert that his puzzle can employ more than one such fabric. Applicant respectfully disagrees with the statement in the present Action that "Klimpert discloses a puzzle type kit comprising multiple pieces that have surface layers formed collectively of a plurality of soft fabrics distinguishable by touch" (Action, page 2, lines 9 and 8 from bottom; emphasis added). The Action alleges support for this statement

at col. 2, lines 25–38 of Klimpert, but no disclosure of a plurality of fabrics is found there, or indeed anywhere in Klimpert. While it is true that Klimpert’s assembled puzzle has different textures (Action, page 2, line 6 from bottom), these textures are, as pointed out above, respectively soft and hard. Even if Klimpert’s soft-textured (flocked) surface can be considered a “fabric,” his hard-textured (non-flocked) surface is unequivocally not a fabric. The possibility of two or more “soft” textures is not suggested by Klimpert, far less the possibility of two or more soft fabrics that are distinguishable by touch.

Klimpert states that “[a] flocking material” is applied to selected areas (col. 1, lines 50–51), and that “the flocking material” guides the user (col. 1, lines 55–56). Klimpert further states that “the flocking should be understood to be a soft material” (col. 2, line 9). Note the use of the singular throughout, in all references to the flocking material. Although the singular in some situations can be read to embrace the plural, a reading of Klimpert as a whole points to only a single flocking material being used, and in any case there is no express or implied disclosure in Klimpert of two or more such materials being used in a single puzzle. Even where Klimpert suggests an option to use a hard particulate surface material, this is presented as an alternative, not an accompaniment, to flocking (see col. 2, lines 48–50).

2.3. Dependent claims are not *prima facie* obvious

Each of Claims 22, 23 and 26–38 depends from Claim 21. As Claim 21 is shown to be non-obvious over Klimpert in view of Welbourn for reasons set forth above, all claims dependent therefrom are likewise non-obvious over the cited references. If an independent claim is non-obvious under 35 U.S.C. §103, then any claim depending therefrom is non-obvious. MPEP §2143.03.

The Examiner’s remarks with respect to Claims 22, 23 and 26–38 are noted but are moot in view of the non-obviousness of the independent claim from which these claims depend. However, Applicant makes the following observations for the record.

- Contrary to the Examiner’s assertion (Action, page 3, 3rd full paragraph), a plurality of pegs on a rack, as recited in instant Claim 30, and pieces having eyelets to engage such pegs, as recited in instant Claim 31 (and illustrated in Figs. 7 and 7A of the present application), are not disclosed in Welbourn at col. 2, lines 40–62,

and are not analogous to any structure mentioned therein.

- Contrary to the Examiner's assertion (Action, page 3, 4th full paragraph), Klimpert does not disclose pieces having opposing sides of differing soft fabrics. As pointed out above, Klimpert provides no teaching or suggestion of a plurality of soft fabrics, and certainly not at col. 2, lines 51–54 as alleged by the Examiner. The cited passage merely refers to a “three-dimensional ‘sculpture’ puzzle with appropriately textured surfaces.” In light of Klimpert's entire specification, the “appropriately textured surfaces,” even if differing textures are implied as alleged in the present Action, can only be interpreted as flocked or non-flocked, which as shown above do not constitute “differing soft fabrics.”
- Contrary to the Examiner's assertion (Action, page 3, bottom paragraph), Klimpert does not disclose at col. 2, lines 1–11 that “any material” can be used, nor that such material can be a “soft fabric.” As noted above, Klimpert clearly states that “any particulate or granular material” can be used, including, in his preferred embodiment, a soft particulate or granular material such as nylon filament (emphasis added). Particulate or granular nylon filament glued to a hard surface does not appear to meet the present requirement of a “fabric;” even if such material can be considered a fabric, no plurality of such fabrics is found in Klimpert.

2.4. Conclusion: Claims are not *prima facie* obvious over Klimpert in view of Welbourn

As set forth above, Applicant respectfully submits that a *prima facie* case of obviousness cannot be sustained against Claim 21, for lack of suggestion or motivation to combine the cited references or, alternatively, for failure of the references to teach or suggest any one of at least three limitations of Claim 21 discussed herein. Applicant further submits that Claims 22, 23 and 26–38 are non-obvious as depending from non-obvious Claim 21. Withdrawal of the present rejection under 35 U.S.C. §103(a) is respectfully requested.

3. Rejection under 35 U.S.C. §103(a) over Klimpert in view of Welbourn and Lowenstein

Claims 24 and 25 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Klimpert in view of Welbourn and in further view of Lowenstein (U.S. Patent No.

2,076,956). This rejection is respectfully traversed.

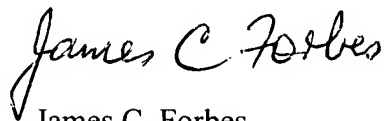
Claims 24 and 25 depend from Claim 23 and ultimately from Claim 21, which as shown above is non-obvious over Klimpert in view of Welbourn. Lowenstein fails to supply any of the at least three elements of Claim 21 that are missing from Klimpert and Welbourn, namely (a) a subject having a medically diagnosed dementia, (b) a therapeutically beneficial cognitive challenge to such a subject, or (c) a plurality of soft fabrics. The elements of the Lowenstein device are described as “substantially rigid” (column 1, lines 9–10, line 19) and, while they can be formed of “fabric” (column 2, line 17), such fabric is not a “soft fabric” as specified in the present claims but instead is “semi-rigid or rigid” (column 2, lines 15–16). Furthermore, nowhere in Lowenstein is it taught or suggested to use two or more soft fabrics that are distinguishable by touch.

Thus at least the requirement for *prima facie* obviousness that all claim limitations must be taught or suggested is not met by the combination of Klimpert, Welbourn and Lowenstein, even if motivation existed to combine these three references, which is not admitted herein. Withdrawal of the present rejection under 35 U.S.C. §103(a) is respectfully requested.

4. Conclusion

Applicant believes the present submission to be fully responsive, all grounds of rejection being overcome or rendered moot. The application is believed to be in condition for allowance of all pending claims.

Respectfully submitted,



James C. Forbes
Agent for Applicant
Registration No. 39,457
Tel. 847-205-0528

Address correspondence to:
James C. Forbes
101 Pointe Drive, #403
Northbrook, IL 60062